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**John S. Knight Institute for Writing in the Disciplines**

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**Author:** Darrick Evensen

**Course:** Natural Resources 1200

**Course Title:** Environmental Risks in Our Backyards: Communication and Ethics

**Year of Award:** Fall 2012

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## Fall 2012 James F. Slevin Assignment Sequence Prize

We are pleased to invite applications for the James F. Slevin Assignment Sequence Prize. This prize of \$500 will be awarded to the teacher submitting the best sequence of writing assignments for a First-Year Writing Seminar (honorable mentions, if any, will receive \$150).

Assignment sequences in a writing course are built around a series of essay topics. These sequences probably represent work assigned during a portion of the course rather than all of the essay assignments distributed over an entire semester. Submissions should include a rationale and a description of your plans for eliciting and responding to student drafts and revisions, as well as a description of how you prepare students for each essay assignment, for example by engaging them in preparatory writing exercises, including informal writing designed to help students understand the material on which they subsequently write formal essays. Reflections on what worked well, and why, and what you would change another time, are welcome.

The winner will be announced to the Cornell community. Prize Winning Materials will be deposited in a web accessible archive and made available to other instructors under a creative commons attribution, non-commercial license. (See [creativecommons.org](http://creativecommons.org) for more information about cc licensing.)

Submissions are due in 101 McGraw Hall by Friday, December 14. No exceptions can be made.

### Fall 2012 James F. Slevin Assignment Sequence Prize Application

~Please Print Clearly. Do not staple. Use paper clips only.~

Instructor's name Darrick T. Evensen CU ID # 2000453  
Department NTRES Course # and title 1200: Environmental risks in our backyards: Communication & Ethics

Should I win a prize, I give the John S. Knight Institute permission to publish, quote from, and/or distribute copies of the assignment sequence, and to distribute publicity to newspapers and other publications, local and/or national, about my winning the prize. I also grant the Knight Institute permission to deposit the assignment sequence in a web accessible archive and make it available under a creative commons attribution, non-commercial license. I am prepared to send electronic versions of my text to Donna O'Hara ([dlo1@cornell.edu](mailto:dlo1@cornell.edu)) in the Knight Institute. I understand that I will receive the award for my prize-winning sequence upon submission of the electronic text.

Communicating Environmental Risks  
Title of Assignment Sequence

Instructor's signature

Darrick T. Evensen

Date

14 Dec. 2012

122 Bruckner Hall  
Cornell University  
Ithaca, NY 14853

14 December 2012

Knight Writing Institute  
101 McGraw Hall  
Cornell University  
Ithaca, NY 14853

Dear James F. Slevin Assignment Sequence Prize selection committee,

I have attached to this letter the final four assignments from my freshman writing seminar, during the Fall 2012 semester. These assignments include all three writing assignments from the second unit in my course and the students' final essay, which was a semester-long project. I ask that you consider these four essays for the Slevin Assignment Sequence Prize.

To understand my goals in designing these assignments, I will put the four writing projects into the context of my full course. The seminar, titled "Environmental risks in our backyards: Communication and Ethics" contained two units: (1) analysis of effective communication about environmental risks, and (2) opportunities to practice such communication. In the first unit, which ran from August to Fall Break, the students composed a critical précis of a piece of environmental communication, an analysis of rhetorical devices used in environmental communication, and an analysis of the ways in which authors use moral claims in environmental communication. During this unit, I spent class time engaging topics such as: creating a clear thesis, eliminating excess verbosity, offering effective transitions, ensuring that a single cogent message carries throughout each piece of writing, revising (as distinct from editing and proofreading), and editing (on the essay and sentence level).

The first half of the course prepared my students to learn about and practice numerous forms of environmental communication. Assignments 4, 5, and 6 required students to model writing styles used by a variety of actors to communicate about environmental risks to myriad audiences. For these three assignments, I required my students to use unconventional gas development via hydraulic fracturing, "fracking", as the environmental risk about which they wrote. This risk is perhaps the most communicated about environmental risk in and around Ithaca; I sought to help my students become engaged in their writing by providing them with a topic of local relevance. In the final assignment, each student was free to choose one of the writing styles used in a previous assignment, or yet another form of communication, to share an important message about an environmental risk (of his/her choosing) with a specific audience.

### Rationale

One of my primary goals, and desired learning outcomes, for my final four writing assignments was for my students to experience, through study and practice, a variety of ways in which one

can communicate effectively about environmental risks. We learnt first hand that the appropriate form a piece of written communication takes will vary substantially, based on the speaker and the audience. In assignment 4, students took on the role of an aspiring newspaper journalist; for assignment 5, the students became either a member of the public communicating with the government, or a government official communicating with the public. Assignment 6 required students to envision themselves as a young university faculty member, sharing complex research in an accessible way with government officials and the public. As students internalized these varied roles, they familiarized themselves with both the importance and constraints of each writing style. In each assignment, I persistently forced them to make their writing increasingly laconic. The vast majority of communication about environmental risks does not occur in academic circles. While students had the opportunity to write an academic paper for their final project (and some students did so), I felt it important to expose them to various writing styles that they might encounter in the future, whether in their career or in future research on environmental risks.

#### How I prepared students for the assignments

Assignment 4: Preparation for this assignment began early in the semester. On 5 September, I took my class to the Stone Computing Lab in Mann Library to meet with Library staff. We learnt about various research methods for investigating environmental risks. Because of my course's emphasis on communication, I asked the librarians to teach my students how to use newspaper search engines such as LexisNexis and Access World News. Newspaper articles can be a valuable source of information on environmental risks, particularly for context specific information about the manifestation of the risk on the local level, but even more importantly, newspapers are a powerful mechanism for understanding local discourse on risks.

We began working on this assignment in class on 17 October. I distributed the assignment to my students that day, discussed it in class, and then engaged the class in several activities, aimed at helping the students learn about good journalist practices. In advance of class, I had asked each student to use a newspaper search engine to identify one article on fracking that they would characterize as "biased" reporting and one they would label as "balanced" reporting. The students brought these articles to class and then reviewed them in small groups in a "jigsaw activity". First, I split the class into six groups of three students. Each student read his/her partners' sample articles. As a group, they identified the best and worst articles on the following attributes: balanced/biased reporting, concise writing, and use of varied sources. I asked each group to identify specific words and phrases that illustrated balanced/biased reporting. Following this group work, I reconfigured the groups into three groups of six (each group had one student from each of the six previous groups). Each student shared the findings from the previous group with his/her peers in the new group. I circulated throughout the class to facilitate discussions in the groups and to answer questions.

Following the jigsaw activity, we came back together as a full class to debrief the ideas that emerged from the small group discussions. I then used some of my own research on journalistic norms and characteristics of good newspaper coverage to further the conversation the students started. I shared with the class a selection of about twelve audio clips, taken from interviews I



had with journalists on their reporting on fracking. I selected segments where the journalists I interviewed lucidly explained concepts such as: understanding your audience, controlling biases, giving voice to the voiceless, finding appropriate sources, and adhering to journalistic norms around issues such as investigative reporting and serving as an agent of change.

I began the next class, 22 October, by having the students engage in a free writing activity; they reflected on the style of writing they planned to use in their newspaper article assignment. I asked them to consider issues such as rhetorical devices and journalistic norms. For this class, I required my students to write the introduction (first 200 words) to their newspaper article and to identify a newspaper for which they intended to write their article. They also needed to bring to class three articles on fracking from that newspaper for which they would be writing. In groups of two, the students spent about 30 minutes reviewing each other's introductions and providing structured feedback (I provided a list of aspects on which to focus). Each student read his/her partner's introduction and skimmed the three articles from his/her newspaper so that comments could be tailored to the specific news outlet for which the student was writing. In the final twenty minutes of class, I shared research I conducted via a content analysis of newspaper coverage of fracking in four newspapers throughout southern NY and northern PA. I interactively engaged my students in interpreting my research findings. We discussed what my findings could mean for the types of issues they would focus on in their newspaper articles.

Assignment 5: In the next class, 24 October, I transitioned from mass media communication with the public into dialogue between government and the public on issues of environmental risk. In advance of this class, I asked each student to read one section of the NY Department of Environmental Conservation's SGEIS (a document that discusses potential environmental, economic, and social impacts from hydraulic fracturing). The students selected the 20-30 page section that most interested them (from a list of six sections). I started class with a free writing activity where each student summarized and evaluated the importance of the impacts discussed in the section he/she read. I then broke the students into small groups (based on sections they read) to determine jointly the key points in their section. I then combined the small groups into two large groups (based on related topic areas). Whereas in the small groups, the students summarized the SGEIS points, in this group, they shared the main impacts from the SGEIS but also evaluated for themselves the importance of each of the impacts. Each large group then presented the results of their discussion with the other large group. Because the students would either comment on the SGEIS as a citizen or summarize it in a press release from the DEC, I wanted to ensure they fully understood it before focusing on the nuances of how to communicate this information.

In the last fifteen minutes of class, I handed out an edition of the *Cornell Sun* to the students and asked them to find one example of a well-written article and one example of an article that could benefit from improvement. I encouraged them to discuss their findings informally with each other; the students formed small groups on their own and pointed out aspects of good and bad reporting to their peers. This was a final task to help with preparation for the journalistic article assignment due in two days.

In class on 29 October, we primarily reviewed press releases and letters to government officials on the issue of fracking. I had compiled a collection of such documents that I obtained from the

Internet. I made this packet available on Blackboard and asked the students to read it in advance of class. To start class, I split the group in two. One half would focus on press releases and the other on letters to politicians and government agencies. Each student then free wrote on effective modes of communication in the letters or press releases (e.g., what aspects of the writing made/could make it achieve its purpose? I asked the students to consider content, structure, and tone for starters). After the free write, I split each group into three sub-groups to discuss aspects of effective writing in their medium. I asked them to identify specific features, to collect examples of those features, and to be prepared to present to the full group. I then combined the sub-groups into the two big groups. They shared their perspectives and compared examples.

Throughout my teaching, I intentionally use discussion at different levels (e.g., partners, small groups, large groups, full class) to appeal to a variety of learning styles, to draw out as many ideas as possible, and to encourage participation. As always, when students engage in group work, I circulate throughout the class, facilitating discussions and ensuring that all students are engaged in their groups. After the two large groups exchanged ideas, the groups presented a set of distilled ideas to the other group. We discussed these thoughts together.

Throughout my class activities, I sought to create as many opportunities as possible for my students to generate knowledge themselves. I could easily have taught them my knowledge about the most effective ways to write newspaper articles, press releases, and letters to government officials. Ultimately, I did share my knowledge with them. Nevertheless, I wanted the students to struggle to identify the characteristics of good writing in each of these media for themselves. Most of the ideas I planned to share with them they produced on their own. I believe they were better able to internalize these lessons by discovering them through their own investigations and group collaborations.

Assignment 6: During class on 31 October, I introduced the policy brief assignment. This assignment shifted the speaker and audience for the writing once again. We started class with a full-class discussion of the roles that university professors, researchers, and non-governmental organizations play in communication on environmental risks. We then examined policy briefs as one form of communication used by these groups to share complex research findings with policy makers and the public. The students had read examples of policy briefs on fracking in advance of class; we discussed appropriate content, organizational style, and tone for policy briefs. I finished this class period by showing several short online videos that helped students visualize communication about fracking in the public sphere. My goal was to highlight the type of information being shared in public fora; this illustrated (1) the important role that policy briefs can play to fill communication gaps, (2) the need to speak a language the public can understand (i.e., remaining true to the scientific findings, but not being esoteric). At the end of class, I introduced the role-playing exercise we would engage in during the following class.

On 5 November, from the moment the students walked into class, they were in character. On 31 October, I randomly assigned each student a role as a “major player” on the issue of fracking in NY State. I was Governor Cuomo and I had invited these experts, activists, journalists, and politicians to Albany to help me make an informed decision on fracking regulations (see attached “invitation” I provided to the students). Through informal and structured discussions, the actors

negotiated, formed coalitions, and devised regulations. At the end of the class, we debated the proposals and I made a final ruling on my recommendations based on the strength of the arguments the actors made. In advance of the class, each character had to research his/her role in the fracking debate, and to write a brief synopsis of his/her positions and interests. I used this role-playing simulation (and the debrief that followed) to highlight the complex policy environment in which regulation takes place. I encouraged my students to be aware of this nuance when designing their policy briefs.

Final project: I introduced the final project during the third week of class. In mid-September, I met individually with each student to discuss his/her incipient ideas and to work through a plan of action for conducting independent research on the topic. The project required each student to construct a meaningful message, tailored to a specific audience, about an important environmental risk. This broad scope allowed the students to choose their own media for the project. A student could write a newspaper article, scientific report, one-act play, etc. I worked with each student to identify a medium that he/she would find enjoyable to write in, and that would convey, appropriately and effectively, the message he/she sought to communicate.

I included a number of “check points” to ensure that my students were making adequate progress on their final projects. While including all the caveats about outlines not necessarily being a great tool for all students, and cautioning my students not to allow the outline to constrain their thinking or writing, I did ask each student to submit an outline for his/her project in the middle of October. In early October, I required the students to submit annotated bibliographies for their final projects (the format and contents of which I discussed in class). In mid-November, I held my second round of individual meetings on the project with the students. I looked at their work to date and offered final reflections and recommendations. I asked the students to come to me with any questions they had about finishing their projects. On the last day of class, the students provided me their first versions of the final project. I reviewed these, offered feedback within a week, and then gave them a final week to revise their work.

#### What worked well? What would I change?

Often I have heard seasoned faculty assert that it takes about five years to bring your class to where you want it. I am skeptical that evolution and tweaking of a good course ever stops, but I certainly agree that the first few iterations of a course present the greatest opportunity for modifications. Many of the alterations I would make to the second unit of my course are based on the written work I received from my students. I could address common mistakes, repeated constantly across my students, in advance of the assignments. For example, I think I could have done a better job of explaining a few components of the policy brief. I would also provide my students with different examples of policy briefs for their advance reading if teaching this course again.

While some modifications would arise from my observations of student trouble in completing their assignments, other adjustments to the course material would come from witnessing activities that went unexpectedly well. The role-playing simulation was likely the most valuable experience that several of my students engaged in all semester (within my course). I have never



designed a role-playing simulation like this before; its success in helping students to understand the nuance of the policy process and helping them view the issue of fracking as critical thinkers led me to consider additional role-playing opportunities and ways to extend the current one into a two-day simulation.

While there is certainly a wealth of opportunities to improve my course, I do believe that many of the activities were successful. I used questionnaires to collect feedback on the course content and structure from my students during the fifth and ninth weeks of the semester. I modified my teaching accordingly at each juncture to meet my students learning needs (while staying true to my learning objectives for the course). The students expressed in both feedback opportunities that they appreciated the mix of activities we engaged in during class time. They benefited from the small group work, large discussions, integration of audio and visual material into the class, and in-class debates. They particularly enjoyed the readings I assigned during the second half of the course (which were mostly examples of the various forms of environmental communication about which I was teaching).

### Conclusion

Teaching this course was the singular most enjoyable aspect of my six years at Cornell. I spent a great deal of time designing this course in a way to engage my students, to make them care about writing well, and to teach them that writing can be fun. Above all else, this is the reason I gave my students assignments that spanned many different writing styles – I wanted them to find a form of writing that truly appealed to them, and that would excite them about writing throughout their college career and beyond. I observed significant improvement in several students' writing over the course of the semester. I will be forever thankful for the small degree to which my teaching influenced their improvement.

*Respectfully,*

A handwritten signature in cursive script, reading "Darrick T. Evensen". The signature is fluid and stylized, with a long horizontal flourish extending to the right.

*Darrick T. Evensen*

# *Your Presence is Requested*

*by the Honorable Andrew M. Cuomo, 56<sup>th</sup> Governor of the State of New York*



Please join Governor Cuomo at the conference room of the Governor's Mansion (110 Bradfield Hall) from 8:40-9:55 AM on Monday, 5 November, to discuss the issue of hydraulic fracturing for natural gas in New York State. Due to your role as an expert and/or opinion leader on this subject, the Governor seeks your advice on how to regulate high-volume slick-water hydraulic fracturing for natural gas throughout New York.

During this meeting/reception, you will have the opportunity to discuss potential approaches to regulation informally with the other attendees and then, after deliberations and negotiation with the other leaders, to sit down formally with the Governor to present him with a case for a specific approach to regulation. The Governor hopes that all the attendees will come together to create an agreeable solution and means for the state to move forward on this important but contentious issue.

If all attendees are unable to agree, each faction of attendees that forms will need to present its own case to the Governor, in front of the other attendees; other factions will have the opportunity to respond. Based on the strength of the arguments (focused on science, policy, feasibility, ethics, etc.) presented by the attendees as a whole, or of each faction, the Governor will end the meeting by announcing his decision on regulation of unconventional gas development in New York.

Dress is business casual with business attire preferred.

RSVP by Wednesday, 31 October, at 9:55 AM.

## *List of Invitees (in alphabetical order):*

**Jon Campbell:** Journalist for Gannett newspapers, Albany Bureau – has conducted extensive newspaper coverage of proposed hydraulic fracturing regulations for NY

**Timothy Considine:** Professor of Economics, The Pennsylvania State University – has conducted research on the economic impacts of shale gas development



**Terry Engelder:** Professor of Geosciences, The Pennsylvania State University – has conducted research on the geological potential for gas development from the Marcellus Shale

**Dan Fitzsimmons:** President, Joint Landowners Coalition of New York (JLCNY) – represents a group of citizens supportive of natural gas development in New York State

**Josh Fox:** Independent film maker – created the documentaries “Gasland” (2010) and “The Sky is Pink” (2012); outspoken on inability of regulations to address environmental impacts

**Brad Gill:** Executive Director, Independent Oil and Gas Association of New York – represents an industry group seeking to promote natural gas development in New York

**Walter Hang:** President of Toxics Targeting – runs an organization that collects and analyzes data on potential and realized environmental contamination, including from fracking

**Maurice Hinchey:** US Congressional Representative (D-NY, 22<sup>nd</sup> district) – has sponsored legislation to regulate fracking and spoken out against hydraulic fracturing in NY

**Anthony Ingraffea:** Professor of Civil and Environmental Engineering, Cornell University – has conducted research on the mechanics of drilling and been an outspoken critic of it

**Tom Libous:** NY State Senator (R-52<sup>nd</sup> district) – serving Broome, Chenango, and Tioga counties, he has strongly supported drilling for natural gas in New York

**Barbara Lifton:** NY State Assemblyman (D-125<sup>th</sup> district) – serving Ithaca and Cortland, she has strongly opposed hydraulic fracturing and called for stricter regulations in NY

**Joe Martens:** Commissioner, New York State Department of Environmental Conservation – has tried to weigh the risks and benefits of hydrofracking while working on regulations

**Katherine Nadeau:** Water and Natural Resources Director, Environmental Advocates of New York – works for an environmental group calling for stricter regulation of fracking

**Tom Reed:** US Congressional Representative (R-NY, 29<sup>th</sup> district) – has supported unconventional gas drilling in NY mainly due to its potential for job creation and economic growth

**Mark Ruffalo:** Actor (including role as *The Hulk*) – has been a strong activist voice against fracking due to water quality concerns; he lives along the Delaware River in the Catskills

**Nirav Shah:** Commissioner, New York State Department of Health – was asked recently by Gov. Cuomo and Joe Martens to perform a review of fracking’s impacts on public health

**Tom West:** Attorney, Anschutz Exploration Corporation – represented a gas company that sued the Town of Dryden, NY, over a moratorium on drilling enacted by the Town Board

**Tom Wilber:** Author and blog writer – has served as one of the chief sources of information for the public on regulatory development and public opinion about gas development in NY

## NTRES 1200: Writing Assignment #4: *Journalistic article*

**Rationale:** I want you to understand, and gain experience applying in your own writing, characteristics of a well-written newspaper article focused on environmental risk(s). Mass media coverage is a major means by which discourse on environmental risks reaches the public. To learn about how social structures can both *reflect* and *create* public perceptions of risk, you must develop at least a preliminary awareness of the role that good and bad media coverage can play in environmental communication. By writing a journalistic article yourself, my hope is that you will become a more critical reader of media coverage on environmental risks, and perhaps of media coverage in general.

### Assignment:

You are an aspiring journalist looking to gain the coveted position of “environmental risk reporter” at the newspaper of your choice. This position has just opened up and you need to submit a sample of your work to the editors of the paper. Because natural gas development by means of hydraulic fracturing has been a hot topic for the newspaper recently, the editors want you to submit an article that discusses one or more risks or benefits associated with natural gas development via this process.

The editors, of course, are looking for a well-researched article that shows a balanced understanding of the issue and that presents valid, factual information about the risks or benefits on which you focus. Ideally, they would like to see you consult and appropriately cite at least five sources in your article: two from government agencies (at the municipal, county, state, or national level), one from a university professor/researcher or published scientific study/report, one from an anti-gas development organization, and one from a pro-industry organization. Because, in this job, you will need to write appealing articles that immediately draw in readers and that meet strict word limits, the editors are looking for a concise article (no more than three pages, double spaced) that captures the reader’s attention immediately and holds it throughout the article.

You must pick a newspaper for which you would like to write. This can be a newspaper with a national audience, such as the *New York Times* or *Wall Street Journal*, a paper with a regional audience such as the *Binghamton Press and Sun Bulletin* or the *Williamsport Sun Gazette*, a small weekly paper with a local audience such as the *Ithaca Times*, or an international paper such as *The Globe and Mail* (Toronto, Canada) or *The Times* (London, UK). Your article should be relevant to the readership of the paper for which you write; it must focus on risks and/or benefits of natural gas development germane to your audience. Natural gas drilling via means of hydraulic fracturing (fracking) must have been covered in several articles already written in the paper for which you choose to write. Your article can be about a single event related to hydraulic fracturing or about the process more generally.

The editors are accepting writing samples up through 8:40 AM on 26 October 2012. You should submit your sample article to the paper's Managing Editor, Mr. Darrick Evensen. He will evaluate your work based on the following criteria:

1. Presentation of balanced, objective coverage (This is a news article, not an opinion column. You can certainly let your personal journalistic norms show, such as the need to give voice to the public and the need to promote transparency, but you should not advocate from a "pro-fracking" or "anti-fracking" perspective);
2. Effective and fluid citation of a diverse selection of relevant sources;
3. Creation of a compelling story and interesting message;
4. Ability to grab initially and then hold the reader's attention throughout the article;
5. Production of a message appropriate to the audience of the newspaper that you choose.

**NTRES 1200: Writing Assignment #5:**  
***Press release from a government agency***  
***OR Letter to a politician/government agency***

**Rationale:** This class focuses on communication of environmental risks. Particularly because this is a writing seminar, I want you not only to learn about effective ways to communicate about environmental risks, but also to put some of those ideas into action. For the second half of the course, we are conducting an in-depth case study of unconventional natural gas development in the Marcellus Shale region of New York and Pennsylvania. Some of the information sources we will examine on this topic are government reports and regulations on hydraulic fracturing. After reading these reports and regulations, you will respond either (1) *to the government agency*, expressing support for and/or concern about the agency's regulations, or (2) *as the agency*, writing a press release that condenses massive amounts of dense regulations into sound bites appropriate for mass media and public consumption. Some of the students in this course may end up working for a government agency some day and others of you may end up in careers where you need to respond to press releases from such agencies. All of you will one day be a citizen who feels the urge to express yourself intelligently, lucidly, and laconically about a concern that potentially affects you.

**Learning Outcomes:** You, the student, will practice condensing enormous amounts of information into a small number of relevant points. You will grow in your ability to make an argument and defend it effectively, even when you are severely limited by the number of words you can use. You will understand better, through your own writing, what it means for a government agency or a citizen to be civically responsible.

**Assignment:** The New York State Department of Environmental Conservation (NYSDEC) issued a revised version of the "Supplemental Generic Environmental Impact Statement on the Oil, Gas, and Solution Mining Regulatory Program" (SGEIS) in September 2011. This mammoth document of over 1500 pages is the product of years of research, deliberation, public comments, revision, and more revision. For this assignment, you will focus on one section of Chapter Six of the SGEIS (i.e., water resources, ecosystems and wildlife, air quality, socio-economic impacts, visual impacts and noise, or transportation and community character impacts). You will also need to take on one of the two roles below.

Choose ***one*** of the two options below for your assignment:

1. You are a media relations official at the NYSDEC. Commissioner Joe Martens has instructed you to create a press release, no more than three pages (double spaced), that details the most important topics and information contained in the section of the SGEIS on which you have chosen to focus. Naturally, this press release must follow the form and conventions of all NYSDEC press releases. Turn your press release into Mr. Darrick Evensen, who will review the document for Commissioner Martens before it is made public.

Mr. Evensen will check your press release to ensure that it:

- a. Mentions the most important topics,
- b. Provides any necessary definitions,
- c. Is clear to the journalists and members of the public who will read it,
- d. Does not include any unnecessary words; is as concise as possible, and
- e. Faithfully represents the position of the NYSDEC on the topic you select.

Your press release is due on Mr. Evensen's desk at 8:40 AM on 31 October.

2. You are a citizen of New York State. You have been following fervently the discussion of proposed regulations for hydraulic fracturing operations in your state. When the revised NYSDEC SGEIS was released, you eagerly read several sections of special interest to you. You now wish to express your satisfaction/dissatisfaction with a particular section to the state government. Choose a state politician (e.g., the Governor, your state assembly representative, or your state senator) or Commissioner Martens of the DEC; write a letter to this individual expressing your support or frustration with the section of the SGEIS.

In your letter, you can discuss one or more of the following: quality (e.g., credibility and comprehensiveness) of the scientific data contained in the report, appropriate or inappropriate basis for determining the recommended regulations, and/or any impacts that have received too little attention or have been neglected. You must realize that the individual you select to send your letter to does care about his/her constituents, but has limited time available. He/she will stop reading your letter after three pages, double-spaced. Your letter should respect the etiquette and formality of a letter to a high-level government official.

The official will consider your letter on the basis of its ability to do the following:

- a. Present a clear argument backed by appropriate references to the SGEIS,
- b. Offer a reasoned perspective that focuses explicitly on matters relevant to the SGEIS and not on extraneous topics,
- c. Explain concisely whether you support or oppose a specific aspect of the SGEIS (and explain why), and
- d. Show a level of deference and respect to the official and to the work put into the SGEIS, even if you choose to disagree with some aspect of the report.

Your letter should be delivered to the local postmaster, Mr. Darrick Evensen, by 8:40 AM on 31 October so he can mail it to the appropriate official.



## NTRES 1200: Writing Assignment #6: *Policy Brief*

Rationale: I want you to understand, and gain experience applying in your own writing, characteristics of a well-written policy brief focused on complex risk(s). While university professors and researchers often disseminate their findings to fellow academics by publishing academic books and journal articles, they also share their research with public audiences (government decision makers and the general citizenry) by creating policy briefs. A policy brief takes a large amount of research on a topic of public relevance and condenses it into a few major points, written in accessible language; it also offers real world implications of the research. University researchers often command substantial authority and trust when speaking on natural, physical, and social scientific topics. By gaining experience writing a policy brief, I hope you will realise and internalise the important role of academics in sharing knowledge about complex risks, not only with other academics, but also with public audiences.

### Assignment:

You are a new assistant professor at Cornell University in the economics, geosciences, biological and environmental engineering, or sociology department (choose the department that most interests you). You know that there are a large number of misconceptions and false data circulating about the potential/expected impacts of natural gas development associated with hydraulic fracturing. The Chairperson of your department asks you to create a policy brief that can help to set the record straight on **one aspect** of natural gas development within your discipline. Think of this as an opportunity to synthesize the data that exists on this risk/benefit of natural gas development before beginning your own research on it. This is also your chance to communicate with local politicians and civil service policy makers about the best course of action on the subject you choose.

You must write a policy brief (of no more than *two pages single-spaced*) that:

- Introduces the issue, laconically providing relevant background information
- Offers data that you deem to be the most important and relevant to the topic
- Succinctly highlights the key points that the public (and particularly decision makers) should know
- Cites (with proper references) at least three academic sources of information on the topic
- Provides 2-3 thoughtfully created/selected tables or graphics
- Analyzes the importance of the data for policy related to natural gas development
- Offers implications and/or policy recommendations for regulation

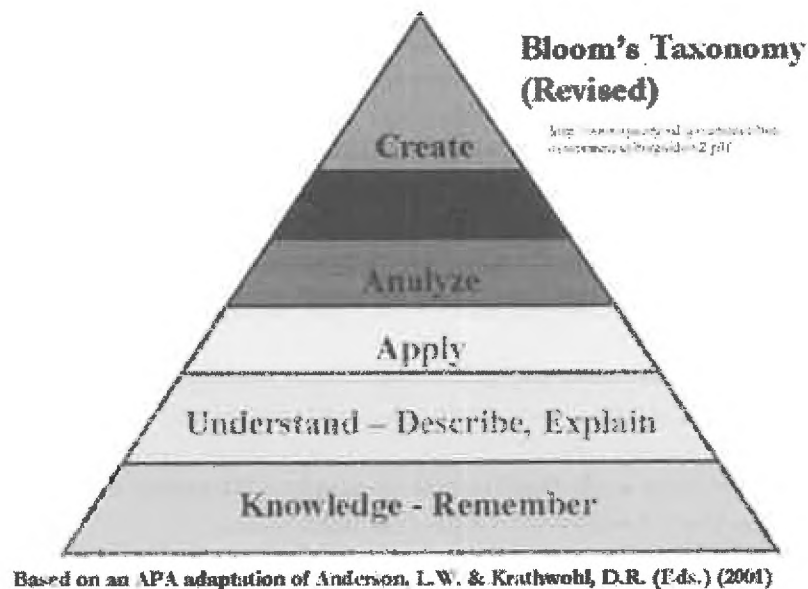
Your policy brief is due to the Chairperson of your department, Darrick Evensen, by 8:40 AM on Monday, 12 November. **You must also post your policy brief on Blackboard by this time.**

A fellow faculty member in your department will review your work and provide suggestions for revisions by 8:40 AM on Wednesday, 14 November; likewise, you will review a policy brief from one of your peers. The final version of your policy brief is due to Mr. Evensen by 8:40 AM on Wednesday, 21 November.

## NTRES 1200: Final Assignment: *Communicating about an Environmental Risk*

**Rationale:** Throughout this course, you will learn about several types of environmental risks, multiple audiences that can be exposed to those risks, and a diversity of ways of communicating about those risks. You will learn how effective messaging strategies vary across different types of communication via variation in content, voice, presentation style (medium), citation and attribution of facts, and means for distributing of the message. You will *gain knowledge, describe and explain* the information you learn, *apply* that knowledge to specific examples we use in class, make *comparisons*, and *analyze* the knowledge to identify and critique the most important arguments. All of these skills represent steps in the hierarchy of learning (see diagram of Bloom's taxonomy below). According to pedagogical theory, by performing different activities and handling information in different ways, students engage in unique forms of learning that are each essential to thinking intelligently.

In your final assignment, I want you to engage the two most complex types of *higher order* learning, as identified in the diagram below; I want you to *evaluate* information about an environmental risk and then to *create* a message that communicates something important about that risk.



**Assignment:** This is an opportunity for you to demonstrate your growth and development as a writer of polished prose. You will exhibit your ability to find information pertinent to a specific audience and to synthesize that information into a message you can convey pithily and convincingly.

There is no page length for this assignment because your final product can take many forms. You will each have two one-on-one conferences with me to discuss the project (see timeline below); we can discuss appropriate project length at that time. **Your task is as follows:**

1. **Select an environmental *hazard* that interests you** (an environmental hazard is an object, process, or event that could pose risks to humans and/or the natural world).
2. **Select an environmental *risk* connected to that hazard that interests you** (a risk is something that humans perceive as problematic or potentially problematic; for example, hydraulic fracturing is a hazard, but drinking water contamination from hydraulic fracturing is a risk).
3. **Select an aspect of that risk that interests you** (e.g., for drinking water contamination from hydraulic fracturing, you could be interested in: (1) analyzing the ways this risk is framed in public discourse, (2) evaluating the validity of the sorts of normative claims that are, or could be, made about this risk, or (3) synthesizing physical science data on the probability and severity of this risk). Choosing a single aspect will help to appropriately focus your project and to prevent it from being too broad.
4. **Identify an important message on the aspect of the risk you selected; identify an audience for that message.**
5. **Select a medium in which to present your message to the desired audience** (you do not need to actually present the message to your desired audience, but if you find a way to do so, that would be great as well! For example, you may be interested in developing a curriculum for a middle school classroom that you could potentially implement. This is just one example.)
6. **Research the hazard, risk, aspect of the risk, and characteristics of your desired audience.**
7. **Synthesize your research to generate a single, coherent, compelling message about the risk that is relevant to your audience.**
8. **Create the message.**

**\*\*Note:** I recommend that you follow the above steps in the order presented. You could choose the medium first, of course, but I think it would be more difficult to create a truly effective and convincing message if you did not start by letting the message stem from a hazard and risk, and then letting the audience and medium stem from your desired message.\*\*

A note on your medium of presentation: Any medium is equally good *if* you are able to follow appropriately the conventions of the medium. In the syllabus, I indicated that you should design a 'creative' message for this assignment. Creativity, however, lies in thinking critically and innovatively about the risk, the audience, and the message. A well-researched and written scientific literature review could end up being very creative, whereas a song or video that offers a vapid message directed at an inappropriate audience could lack creativity. Remember, from the syllabus, that if your project is more 'artistic', you need to accompany it with an essay explaining your research process and interpreting the importance and value of the message in your final project. The *Oxford English Dictionary* defines creativity as, "**Inventive, imaginative; of, relating to, displaying, using, or involving imagination or original ideas as well as routine skill or intellect.**" I seek these qualities in your final project.

### Timeline:

- **Saturday, 15 September (4:00 PM)** – Post on Blackboard the following:
  - In one paragraph, *identify* and *explain the reason you selected* the hazard, risk, and aspect of the risk that you currently plan to focus on for your project. In a second paragraph, *identify* and *explain the reason you selected* the message and audience you are thinking of using. Say nothing about medium at this point. You can change your focus later, but I want you to start thinking about possibilities at this point. Why do the hazard, risk, and aspect of the risk interest you?
- **Sunday, 16 September (6:00 PM)** – Read and respond to your two fellow group members' blackboard posts. Mention, for each group member:
  - At least one thing that strikes you as well-conceived,
  - At least one area of potential improvement, and
  - At least one question for the group member to think about as he/she moves forward with the assignment.
  - Remember, at this stage, you are providing feedback on ideas, not on writing mechanics or style; the time will come for feedback on those as well.
- **Monday-Wednesday, 17-19 September** – Individual conferences with the instructor.
  - In addition to the post you make on Blackboard, find (and bring with you to the meeting) at least three sources, or links to sources, that you think would be valuable for your research on the risk, aspect of the risk, and/or audience you select.
- **Wednesday, 3 October (in class)** – Annotated bibliography due.
- **Wednesday, 17 October (in class)** – Turn in an outline, storyboard, draft schematic, description of images, etc. The item you turn in will depend on the

medium you choose, but regardless of its form, the purpose here is to clarify in detail your intentions for the hazard, risk, aspect of the risk, message, audience, and medium for your project.

- **Monday-Tuesday, 12-13 November** – Second round of individual conferences with the instructor.
  - At this point, you should be moving beyond outlines and schematics and writing in the medium you have selected for your project.
  - Bring to your conference any work you have completed thus far, regardless of its stage in the development process. Also bring questions (e.g., How can I better tailor my message to my specific audience? Are the amount and scope of my research, and the types of sources I use, adequate and/or adequately presented? Is the focus of my message too narrow? Too Broad? Etc.)
- **Wednesday, 28 November (8:30 AM)** – Submit to me via e-mail (Microsoft Word document, link to web content, sketches, etc.) your first version of the assignment. Notice that I do not use the phrase 'first draft'. This version should not be a rough draft, it should be an honest attempt to respond to this assignment as best as you can. The better this version is, the more helpful my comments on it will be. Ideally, you would not need to revise this version too much.
- **Wednesday, 5 December (in class)** – I will send you comments on your first version via e-mail.
- **Wednesday, 12 December (6:00 PM)** – Submit the final version of your project to me via e-mail.